IN THE CLAIMS

1. (Original) A heat exchanger suitable as part of a heating, ventilation and/or air-conditioning device, particularly of an automotive vehicle, comprising a plurality of modules (14, 100) stacked in a first direction, connected to an inlet pipe (22, 82, 101) and to an outlet pipe (24, 84, 102) for a first fluid and suitable for circulating said first fluid, characterized in that said modules comprise two series of distinct channels (137, 138, 139) suitable for receiving said first fluid and a second fluid, the second fluid being conveyed by at least a third pipe (91, 104, 105).

2. (Original) The heat exchanger as claimed in claim 1, in which one of the first and second fluids is immobile in said channels, the exchanger performing a static storage function.

3. (Original) The heat exchanger as claimed in claim 1, in which the first and second fluids flow in said channels, the exchanger performing a dynamic storage function.

4. (Original) The heat exchanger as claimed in one of the preceding claims, comprising at least one row of parallel flat tubes (14) in each of which first longitudinal channels (28) and second longitudinal channels (32) are formed for circulating the first and second heat transfer fluids respectively, intervals being arranged between the tubes for the passage of an air flow (F).

5. (Original) The heat exchanger as claimed in claim 4, in which the first and second channels (28, 32) of each tube (14) are arranged respectively on either side of an intermediate partition extending substantially perpendicular to the tube alignment direction.

6. (Original) The heat exchanger as claimed in claim 5, in which the second channels (32) have a thickness of between 1 and 5 mm in said direction.

7. (Currently Amended) The heat exchanger as claimed in claim 4 ~~one of claims 4 to 6~~, in which the tubes are connected at one of their ends to a manifold (18) bounding chambers (46, 48, 50, 52, 60) for the first and second heat transfer fluids, two subassemblies of the first channels (28) of the same tube (14) terminating in two different chambers (46, 52) and communicating together at the opposite end of the tube, and two subassemblies of the second channels (32) of the same tube (14) also terminating in two different chambers (60) and communicating together at the opposite end of the tube, in order to define U-shaped routes between the respective chambers for the first and second fluids.

8. (Original) The heat exchanger as claimed in claim 7, in which the manifold comprises a profiled part (38) with longitudinal ducts (42, 50, 52, 60) which define said chambers.

9. (Original) The heat exchanger as claimed in claim 8, in which at least one (42) of said ducts is divided by at least one transverse partition (44) into at least two chambers (46, 48) in order to define, for the first fluid, a route of at least four passes in the heat exchanger.

10. (Original) The heat exchanger as claimed in either of claims 8 and 9, in which the profiled part (38) has first and second ducts (42, 50) defining the chambers (46, 48, 50) which communicate with the first channels (28), and a third duct (52) arranged between them, an inlet orifice (22) and an outlet orifice (24) for the first fluid, arranged at a first end of the manifold, communicating one with the first duct (42) and the other with the third duct (52), and one of the first and second ducts communicating (58) with the third duct in the vicinity of the second end of the manifold.

11. (Original) The heat exchanger as claimed in one of claims 1 to 3, comprising a plurality of modules (100) stacked in a first direction, each formed of three mutually joined plates, that is a first plate (108) turned toward a first end of the stack, a second plate (109) turned toward the second end of the stack and a third intermediate plate (110), the plates each extending, substantially along the same contour, in the second and third directions substantially perpendicular to each other and perpendicular to the first direction, the modules being separated from each other, in at least one median region, in order to define intervals (106) between them for the passage of an air flow in the third direction, and the plates being stamped in order to define passages (137-139) in each module for the circulation of the first and second heat transfer fluids in the second

direction, respectively on either side of the intermediate plate (110), and having, in two end regions located on either side of said at least one median region, openings (116, 117, 124, 125, 127, 130, 131, 132, 136) for enabling the various modules to receive the first and second fluids, the plates being connected together to be sealed to the fluids around the openings, and at their periphery (111) in each module.

12. (Original) The heat exchanger as claimed in claim 11, in which the passages for the circulation of the second fluid have a thickness of between 1 and 5 mm in the first direction.

13. (Currently Amended) The heat exchanger as claimed in claim 11 ~~either of claims 11 and 12~~, in which each plate has, in a first of said end regions, first and second openings (116, 117, 136) for the circulation of the first fluid in the two directions respectively, and a third opening (130, 131, 132) for the circulation of the second fluid in a first direction, and, in the second of said end regions, a fourth opening (124, 125, 127) for the circulation of the second fluid in the second direction.

14. (Original) The heat exchanger as claimed in claim 13, in which the third opening is arranged between the first and second openings in the second direction.

15. (Currently Amended) The heat exchanger as claimed in claim 13 ~~either of claims 13 and 14~~, in which the fourth opening is elongated in the second direction.

16. (Currently Amended) The heat exchanger as claimed in claim 13 ~~one of claims 13 to 15~~, in which the first plate (108) of a module and the third plate (110) of a neighboring module have respective mutually supporting projections (112, 113) in which the corresponding first and second openings (116, 117) are arranged, the first and second openings (136) of the second plate of said neighboring module being crossed in a sealed manner by the projections of said third plate.

17. (Currently Amended) The heat exchanger as claimed in claim 13 ~~one of claims 13 to 16~~, in which the third opening (131) of the first plate (108) of a module is adjacent to that (132) of the third plate (110) of the same module and to that (130) of the second plate (109) of a neighboring module, the latter opening being arranged in a projection (128).

18. (Currently Amended) The heat exchanger as claimed in claim 13 ~~one of claims 13 to 17~~, in which the first plate (108) of a module and the second plate (109) of a neighboring module have respective mutually supporting projections (120, 121) in which the corresponding fourth openings (124, 125) are arranged, the first and third plates (110) of a module being connected in a sealed manner at an annular zone (111, 134) surrounding the projection (120) of the first plate and the opening (127) of the third plate.

19. (Currently Amended) The heat exchanger as claimed in claim 13 ~~one of claims 13 to 18~~, in which the second direction is substantially vertical, said first end region being the upper region and the second fluid flowing upward.

20. (Currently Amended) The heat exchanger as claimed in claim 13 ~~one of the preceding claims~~, constituting an air-conditioning evaporator, in which the second heat transfer fluid is suitable for passing from the liquid state to the solid state when it receives cold from the first heat transfer fluid and, vice versa, when it restores the cold.

21. (Original) The heat exchanger as claimed in claim 20, in which the second heat transfer fluid has a melting point of between 0 and 10°C. and preferably between 4 and 7°C.

22. (Original) The heat exchanger as claimed in either of claims 20 and 21, in which the second heat transfer fluid has an enthalpy of fusion of at least 150 kJ/kg.

23. (Currently Amended) The heat exchanger as claimed in claim 20 ~~one of claims 20 to 22~~, in which the second heat transfer fluid is selected from tetradecane, paraffins, hydrated salts and eutectic mixtures.

24. (Currently Amended) The heat exchanger as claimed in claim 1 ~~one of the preceding claims~~, in which the heat exchange area between the first and second fluids in the heat exchanger is between 0.5 and 1.5 m^2.

25. (Currently Amended) The heat exchanger as claimed in claim 1 ~~one of the preceding claims~~, in which the direct heat exchange area in contact with the second fluid in the heat exchanger is between 0.5 and 1.5 m^2.

26. (Currently Amended) The heat exchanger as claimed in claim 1 ~~one of the preceding claims~~, in which at least part of the spaces provided in the heat exchanger for the circulation of the second fluid in thermal contact with the first fluid and/or with an air flow is lined with a highly porous heat-conducting foam, particularly graphite.

27. (Currently Amended) ~~The use of a heat exchanger as claimed in one of the preceding claims in a~~ A heating, ventilation and/or air-conditioning device~~, particularly of an automotive vehicle,~~ comprising:

a heat exchanger having a plurality of modules (14, 100) stacked in a first direction, connected to an inlet pipe (22, 82, 101) and to an outlet pipe (24, 84, 102) for a first fluid and suitable for circulating said first fluid, characterized in that said modules comprise two series of distinct channels (137, 138, 139) suitable for receiving said first fluid and a second fluid, the second fluid being conveyed by at least a third pipe (91, 104, 105); and

at least a first closed loop (BF, BC) in which said heat exchanger (BF5, BC2) is crossed by an air flow (F) and in which said first fluid can circulate so as to give up heat or cold to said air flow in the heat exchanger (BF5, BC2), and a second closed loop (BSf, BSc) in which said second fluid can circulate between said heat exchanger (BF5, BC2) and a tank (BSf2, BSc2) so as to receive heat or cold from the first heat transfer fluid in the heat exchanger to store it in the tank (BSf2, BSc2) to restore it to the air flow (F) in the heat exchanger, according to the heating or cooling capacity produced by the first loop and the air flow treatment requirements.

28. (Original) The use as claimed in claim 27, in which the second loop contains between 200 and 500 g of the second fluid.